

SEQUENCE LISTING

<110> Falco, S. Carl
Famodu, Omolayo O.
Klein, Ted
Orozco, Emil M. Jr.
Rafalski, J. Antoni
Shen, Jennie
Cahoon, Edgar B.
Sakai, Hajime

<120> Plant Proteinases

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<151> 1999-February-10

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Lys Ala Tyr Ala Lys Leu His Gly Ser Tyr Glu Ala Leu Glu Gly Gly
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Ile Asp Met Arg Ser Pro Gln Ala Gln Leu
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<213> Oryza sativa

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<213> Glycine max

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Gln Ile
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<213> Zea mays

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 35 40 45
 Gly Ala Gly Glu Glu Ile Asp Met Arg Ser Pro Gln Ala Gln Leu Asp
 50 55 60
 Leu Ala Ser Gly Arg Leu Trp Ser Gln Leu Leu His Phe Lys Gln Glu
 65 70 75 80
 Gly Phe Leu Leu Gly Ala Gly Ser Pro Ser Gly Ser Asp Ala His Ile
 85 90 95
 Ser Ser Ser Gly Ile Val Gln Gly His Ala Tyr Ser Ile Leu Gln Val
 100 105 110

Arg Glu Val Asp Gly His Lys Leu Ile Gln Ile Arg Asn Pro Trp Ala
 115 120 125
 Asn Glu Val Glu Trp Asn Gly Pro Trp Ser Asp Ser Ser Pro Glu Trp
 130 135 140
 Thr Glu Arg Met Lys His Lys Leu Met His Val Pro Gln Ser Lys Asn
 145 150 155 160
 Gly Val Phe Trp Met Ser Trp Gln Asp Phe Gln Ile His Phe Arg Ser
 165 170 175
 Ile Tyr Val Cys Arg Val Tyr Pro Pro Glu Met Arg Tyr Ser Val His
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 Gly Gln Trp Arg Gly Tyr Asn Ala Gly Gly Cys Gln Asp Tyr Asp Ser
 195 200 205
 Trp His Gln Asn Pro Gln Tyr Arg Leu Arg Val Thr Gly Arg Asp Ala
 210 215 220
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 Ser Arg Lys Thr Asn Gly Phe Arg Asn Tyr Gln Ser Ser His Asp Ser
 245 250 255
 Ser Met Phe Tyr Ile Gly Met Arg Ile Leu Lys Thr Gln Gly Cys Arg
 260 265 270
 Ala Ala Tyr Asn Ile Tyr Met His Glu Ser Ala Gly Gly Thr Asp Tyr
 275 280 285
 Val Asn Ser Arg Glu Ile Ser Cys Glu Leu Val Leu Asp Pro Tyr Pro
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 325 330 335
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 <213> Oryza sativa

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<212> PRT
<213> Oryza sativa

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35 40 45

Gly Gly Ala Gly Glu Glu Ile Asp Met Arg Ser Pro Gln Ala Gln Ile
50 55 60

Asp Leu Ala Ser Gly Arg Leu Trp Ser Gln Leu Leu His Phe Lys Gln
65 70 75 80

Glu Gly Phe Leu Leu Gly Ala Gly Ser Pro Ser Gly Ser Asp Ala His
85 90 95

Ile Ser Ser Ser Gly Ile Val Gln Gly His Ala Tyr Ser Ile Leu Gln
100 105 110

Val Arg Glu Val Asp Gly His Lys Leu Val Gln Ile Arg Asn Pro Trp
115 120 125

Ala Asn Glu Val Glu Trp Asn Gly Pro Trp Ser Asp Ser Ser Gln Glu
130 135 140

Trp Thr Glu Arg Met Lys His Lys Leu Lys His Val Pro Gln Ser Lys
145 150 155 160

Asn Gly Val Phe Trp Met Ser Trp Gln Asp Phe Gln Ile His Phe Arg
165 170 175

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Ser Ile Tyr Val Cys Arg Val Tyr Pro Pro Glu Met Arg Tyr Ser Val
180 185 190

His Gly Gln Trp Arg Gly Tyr Ser Ala Gly Gly Cys Gln Asp Tyr Asp
195 200 205

Ser Trp His Gln Asn Pro Gln Tyr Arg Leu Arg Val Thr Gly Arg Asp
210 215 220

Ala Leu Tyr Pro Val His Val Phe Ile Thr Leu Thr Gln Gly Val Gly
225 230 235 240

Phe Ser Arg Lys Thr Asn Gly Phe Arg Asn Tyr Gln Ser Ser His Asp
245 250 255

Ser Ser Met Phe Tyr Ile Gly Met Arg Ile Leu Lys Thr Arg Gly Cys
260 265 270

Arg Ala Ala Tyr Asn Ile Tyr Met His Glu Ser Val Gly Gly Thr Asp
275 280 285

Tyr Val Asn Ser Arg Glu Ile Ser Cys Glu Leu Val Leu Glu Pro Tyr
290 295 300

Pro Lys Gly Tyr Thr Ile Val Pro Thr Thr Ile His Pro Gly Glu Glu
305 310 315 320

Ala Pro Phe Val Leu Ser Val Phe Thr Lys Ala Pro Ile Lys Leu Glu
325 330 335

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<212> DNA
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<212> PRT
<213> Glycine max

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Glu Gly Gly Leu Val Gln Asp Ala Leu Val Asp Leu Thr Gly Gly Ala
35 40 45
Gly Glu Glu Ile Asp Met Arg Ser Gly Glu Ala Gln Ile Asp Leu Ala
50 55 60
Ser Gly Arg Leu Trp Ser Gln Leu Leu Arg Phe Lys Gln Glu Gly Phe
65 70 75 80
Leu Leu Gly Ala Gly Ser Pro Ser Gly Ser Asp Val His Ile Ser Ser
85 90 95
Ser Gly Ile Val Gln Gly His Ala Tyr Ser Ile Leu Gln Val Arg Asp
100 105 110
Val Asp Gly His Lys Leu Val Gln Ile Arg Asn Pro Trp Ala Asn Glu
115 120 125
Val Glu Trp Asn Gly Pro Trp Ser Asp Ser Ser Pro Glu Trp Thr Asp
130 135 140
Arg Ile Lys His Lys Leu Lys His Val Pro Gln Ser Lys Asp Gly Ile
145 150 155 160
Phe Trp Met Ser Trp Gln Asp Phe Gln Ile His Phe Arg Ser Ile Tyr
165 170 175
Ile Cys Arg Ile Tyr Pro Ser Glu Met Arg His Ser Val His Gly Gln
180 185 190
Trp Arg Gly Tyr Ser Ala Gly Gly Cys Gln Asp Tyr Asp Thr Trp Asn
195 200 205
Gln Asn Pro Gln Phe Arg Leu Thr Ser Thr Gly Gln Asp Ala Ser Phe
210 215 220
Pro Ile His Val Phe Ile Thr Leu Thr Gln Gly Val Gly Phe Ser Arg
225 230 235 240
Thr Thr Ala Gly Phe Arg Asn Tyr Gln Ser Ser His Asp Ser Gln Met
245 250 255

Phe Tyr Ile Gly Met Arg Ile Leu Lys Thr Arg Gly Arg Arg Ala Ala
 260 265 270

Phe Asn Ile Tyr Leu His Glu Ser Val Gly Gly Thr Asp Tyr Val Asn
 275 280 285

Ser Arg Glu Ile Ser Cys Glu Met Val Leu Glu Pro Glu Pro Lys Gly
 290 295 300

Tyr Thr Ile Val Pro Thr Thr Ile His Pro Gly Glu Glu Ala Pro Phe
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Val Leu Ser Val Phe Thr Lys Ala Ser Ile Thr Leu Glu Ala Leu
 325 330 335

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<210> 14
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 35 40 45
 Leu Pro Asp Asp Phe Asp Trp Arg Asp His Gly Ala Val Gly Pro Val
 50 55 60
 Lys Asn Gln Gly Ser Cys Gly Ser Cys Trp Ser Phe Ser Ala Ser Gly
 65 70 75 80
 Ala Leu Glu Gly Ala Asn Tyr Leu Ala Thr Gly Lys Met Xaa Val Leu
 85 90 95
 Ser Glu Xaa Gln Met Val Asp Cys Asp His Glu Cys Asp Ser Ser Xaa
 100 105 110
 Pro Asp Ser Cys Asp Ala Gly Cys Asn Gly Gly Leu Met Thr Asn Ala
 115 120 125
 Phe Ser Tyr Leu Leu Lys Ser Gly Gly Leu Glu Ser Glu Lys Asp Tyr
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 <213> Triticum aestivum

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 <213> Triticum aestivum

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 <222> (114)

<400> 16
 Ser Phe Ser Ala Ser Gly Ala Leu Glu Gly Ala Asn Tyr Leu Ala Thr
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 Gly Lys Met Glu Val Leu Ser Glu Gln Gln Leu Val Asp Cys Asp His
 20 25 30
 Glu Cys Asp Pro Ala Glu Pro Asp Ser Cys Asp Ala Gly Cys Asn Gly
 35 40 45
 Gly Leu Met Thr Ser Ala Phe Ser Tyr Leu Leu Lys Ser Gly Gly Leu
 50 55 60
 Glu Arg Glu Lys Asp Tyr Pro Tyr Thr Gly Lys Asp Gly Thr Cys Lys
 65 70 75 80
 Phe Glu Lys Ser Lys Ile Ala Ala Ser Val Gln Asn Phe Ser Val Val
 85 90 95
 Ala Val Asp Glu Glu Gln Ile Ala Ala Asn Leu Val Lys Tyr Gly Pro
 100 105 110
 Leu Xaa Ile Gly Ile Asn Ala Ala Tyr Met Gln Thr Tyr Ile Gly Gly
 115 120 125
 Val Ser Cys Pro Tyr Ile Cys Gly Arg His Leu Asp His Gly Val Leu
 130 135 140
 Leu Val Gly Tyr Gly Ala Ser Gly Phe Ala Pro Ser Arg Phe Lys Glu
 145 150 155 160
 Lys Pro Tyr Trp Ile Ile Lys Asn Ser Trp Gly Glu Asn Trp Gly Asp
 165 170 175

Lys Gly Tyr Tyr Lys Ile Cys Arg Gly Ser Asn Val Arg Asn Lys Cys
180 185 190

Gly Val Asp Ser Met Val Ser Thr Val Ser Ala Thr His Ala Ser Lys
195 200 205

Asp

<210> 17
<211> 1174
<212> DNA
<213> *Oryza sativa*

<400> 17
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gcccacgagg cggccgtccct cccacccgac ggccctcccc acgacttcga ctggagagac 180
cacggcgccg tcggcccccgt caagaaccag ggatcggtgc ggtcggtgcg gtcgttcagc 240
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gagcagcaga tggtcgattg cgaccatgag tgtgattcat cagaacctga ttcagtgtat 360
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cttgagagtg agaaggatta cccctacact gggaggggat gcaacctgca atttgacaag 480
tcgaagattg ttacttcagt tcagaacttc agtggtgtct ctgctgatga ggatcagatt 540
cgtgccaaac ttgtcaaaac tggggccactt gcaattggca tcaatgctgc gtacatgcaa 600
acatacattg gtgggtgtttc gtgcccgtag atctgtggca ggcaccttga tcacgggtgtt 660
cttctcgttg ctacggcgcc atctggtttt gctccaatcc gcctaaaggga taaggcctac 720
tggatcatca agaactcctg gggcgagaaac tggggagagc atgggtacta caagatctgc 780
aggggctcca acgtccgcaa caaatgtggc gtggattcta tggctctcac cgtgctcgcc 840
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cacagtgggt gattctgata ttatatataa gctagaacta cgaatatatac ttagtttatg 960
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ctttaagtat tatcgccatt caccgaactg tatttttact attaccaatc ttttgaatgg 1140
ctgtattat atgcaaaaaa aaaaaaaaaa aaaa 1174

<210> 18
<211> 286
<212> PRT
<213> *Oryza sativa*

<400> 18
Ala Arg Ala Ala Glu His Gly Val Thr Lys Phe Ser Asp Leu Thr Pro
1 5 10 15
Ala Glu Phe Arg Arg Ala Tyr Leu Gly Leu Arg Thr Ser Arg Arg Ala
20 25 30
Phe Leu Arg Gly Leu Gly Gly Ser Ala His Glu Ala Pro Val Leu Pro
35 40 45
Thr Asp Gly Leu Pro Asp Asp Phe Asp Trp Arg Asp His Gly Ala Val
50 55 60
Gly Pro Val Lys Asn Gln Gly Ser Cys Gly Ser Cys Trp Ser Phe Ser
65 70 75 80
Ala Ser Gly Ala Leu Glu Gly Ala Asn Tyr Leu Ala Thr Gly Lys Met
85 90 95

Asp Val Leu Ser Glu Gln Gln Met Val Asp Cys Asp His Glu Cys Asp
 100 105 110
 Ser Ser Glu Pro Asp Ser Cys Asp Ala Gly Cys Asn Gly Gly Leu Met
 115 120 125
 Thr Asn Ala Phe Ser Tyr Leu Leu Lys Ser Gly Gly Leu Glu Ser Glu
 130 135 140
 Lys Asp Tyr Pro Tyr Thr Gly Arg Asp Gly Thr Cys Lys Phe Asp Lys
 145 150 155 160
 Ser Lys Ile Val Thr Ser Val Gln Asn Phe Ser Val Val Ser Val Asp
 165 170 175
 Glu Asp Gln Ile Ala Ala Asn Leu Val Lys His Gly Pro Leu Ala Ile
 180 185 190
 Gly Ile Asn Ala Ala Tyr Met Gln Thr Tyr Ile Gly Gly Val Ser Cys
 195 200 205
 Pro Tyr Ile Cys Gly Arg His Leu Asp His Gly Val Leu Leu Val Gly
 210 215 220
 Tyr Gly Ala Ser Gly Phe Ala Pro Ile Arg Leu Lys Asp Lys Ala Tyr
 225 230 235 240
 Trp Ile Ile Lys Asn Ser Trp Gly Glu Asn Trp Gly Glu His Gly Tyr
 245 250 255
 Tyr Lys Ile Cys Arg Gly Ser Asn Val Arg Asn Lys Cys Gly Val Asp
 260 265 270
 Ser Met Val Ser Thr Val Ser Ala Ile His Thr Ser Lys Glu
 275 280 285

<210> 19
 <211> 935
 <212> DNA
 <213> *Triticum aestivum*

<400> 19
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 aacctgattc atgcgatgct ggatgcaatg gtgggttgat gacttcagcc tttagtctatc 180
 tgttgaatc tgggtggcctt gagagagaaa aggattacc ttacacgggg aaggacggta 240
 cctgcacaa ttgagaagtc aagattgctg ctccagttca aaacttcagc gttgtcctg 300
 ttgatgaaga acagattgct gctaaacctg tgaatatagg accgctggcc atcggtatca 360
 acgcccagata catgcagaca tacatcgggc gagtgtcatg cccatacatc tgcggcaggc 420
 acctcgacca cggtgtcctt ctctcgggct acggggcgctc tggcttcgcg ccttcccgc 480
 tcaaggagaa gccctactgg atcatcaaga atcctatggg cgagaactgg ggggacaagg 540
 gttactacaa gatctgcagg ggctcgaaac tgcgcaacaa gtgtggcgctc gactccatgg 600
 ctctccaggt gtccgcacct cagcgcctcca aggacgagta ggctctggctc tgatctgac 660
 tgatcggcgg cctcctggtg gtcgatcttg gtttcggtgt gtgtatcgctc agaaagaaac 720
 tttatacgt agtagtcggc taggctccat cgtcgttgtg gtatcagcag cgaagatgcg 780
 aagtgcacat agaattgctg ctgtataact tatgcatttg ctaaaattgc tacgccatgc 840
 atgtctgcca cagctattt ggaatgtggc taagaactcc tgaataattc tgtacataat 900
 ttgtattgct tccatcaaaa aaaaaaaaaa aaaaa 935

<210> 20
 <211> 212
 <212> PRT
 <213> Triticum aestivum

<400> 20
 Thr Arg Ser Phe Ser Ala Ser Gly Ala Leu Glu Gly Ala Asn Tyr Leu
 1 5 10 15
 Ala Thr Gly Lys Met Glu Val Leu Ser Glu Gln Gln Leu Val Asp Cys
 20 25 30
 Asp His Glu Cys Asp Pro Ala Glu Pro Asp Ser Cys Asp Ala Gly Cys
 35 40 45
 Asn Gly Gly Leu Met Thr Ser Ala Phe Ser Tyr Leu Leu Lys Ser Gly
 50 55 60
 Gly Leu Glu Arg Glu Lys Asp Tyr Pro Tyr Thr Gly Lys Asp Gly Thr
 65 70 75 80
 Cys Lys Phe Glu Lys Ser Lys Ile Ala Ala Ser Val Gln Asn Phe Ser
 85 90 95
 Val Val Ala Val Asp Glu Glu Gln Ile Ala Ala Asn Leu Val Lys Tyr
 100 105 110
 Gly Pro Leu Ala Ile Gly Ile Asn Ala Ala Tyr Met Gln Thr Tyr Ile
 115 120 125
 Gly Gly Val Ser Cys Pro Tyr Ile Cys Gly Arg His Leu Asp His Gly
 130 135 140
 Val Leu Leu Val Gly Tyr Gly Ala Ser Gly Phe Ala Pro Ser Arg Phe
 145 150 155 160
 Lys Glu Lys Pro Tyr Trp Ile Ile Lys Asn Ser Trp Gly Glu Asn Trp
 165 170 175
 Gly Asp Lys Gly Tyr Tyr Lys Ile Cys Arg Gly Ser Asn Val Arg Asn
 180 185 190
 Lys Cys Gly Val Asp Ser Met Val Ser Thr Val Ser Ala Thr His Ala
 195 200 205
 Ser Lys Asp Glu
 210

<210> 21
 <211> 743
 <212> DNA
 <213> Glycine max

<220>
 <221> unsure
 <222> (645)

<220>
 <221> unsure
 <222> (680)

<220>
 <221> unsure
 <222> (740)

<400> 21
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 aagtggtgccc ggagcgggag gaccaccacc tgcctcaacgc ggagcaccac tcttcccgct 180
 tcaagacaaa gttcgccaag acctacgcca cgcaggagga gcacgaccac cgtctccgta 240
 tcttcaagaa caacttgctc cgcgccaaagt cgcaccagaa attggacccc tccgcccgtc 300
 accgctctcac caggttctcc gatctcactc cggctgagtt tccgcccag tctctcggcc 360
 tgaagccgct cgccttctcc tccgacgctc agaagggtcc gatccttccg accagcgacc 420
 ttctaccca tttcgattgg cgcgaccatg gagctgttac cggcgtcaag aatcagggct 480
 cgtgcggatc gtgttggtca tttagcgcgc ttggagcttt ggaaggtgcc cattttcttt 540
 ctaccgggtg cctcgtgagc ctcagtgcgc agcaacttgt ggattgcgat catgagtggt 600
 atccggaaga acgtggagca tgtgattcgg gttgtaacgg tgggntgatg accactgcac 660
 tttgagtaca cactcaaggn tggtaggacta atgccaagaa agaggattat cctacacaatg 720
 ggagaaaacg ttggccctgn aaa 743

<210> 22
 <211> 234
 <212> PRT
 <213> Glycine max

<220>
 <221> UNSURE
 <222> (209)

<220>
 <221> UNSURE
 <222> (220)

<400> 22
 Met Ala Asn Leu Ser Leu Leu Phe Phe Gly Leu Leu Leu Phe Ser Ala
 1 5 10 15
 Ala Val Ala Thr Val Glu Arg Ile Asp Asp Glu Asp Asn Leu Leu Ile
 20 25 30
 Arg Gln Val Val Pro Asp Ala Glu Asp His His Leu Leu Asn Ala Glu
 35 40 45
 His His Phe Ser Ala Phe Lys Thr Lys Phe Ala Lys Thr Tyr Ala Thr
 50 55 60
 Gln Glu Glu His Asp His Arg Phe Arg Ile Phe Lys Asn Asn Leu Leu
 65 70 75 80
 Arg Ala Lys Ser His Gln Lys Leu Asp Pro Ser Ala Val His Gly Val
 85 90 95
 Thr Arg Phe Ser Asp Leu Thr Pro Ala Glu Phe Arg Gly Gln Phe Leu
 100 105 110
 Gly Leu Lys Pro Leu Arg Leu Pro Ser Asp Ala Gln Lys Ala Pro Ile
 115 120 125
 Leu Pro Thr Ser Asp Leu Pro Thr Asp Phe Asp Trp Arg Asp His Gly
 130 135 140

Ala Val Thr Gly Val Lys Asn Gln Gly Ser Cys Gly Ser Cys Trp Ser
145 150 155 160

Phe Ser Ala Val Gly Ala Leu Glu Gly Ala His Phe Leu Ser Thr Gly
165 170 175

Gly Leu Val Ser Leu Ser Glu Gln Gln Leu Val Asp Cys Asp His Glu
180 185 190

Cys Asp Pro Glu Glu Arg Gly Ala Cys Asp Ser Gly Cys Asn Gly Gly
195 200 205

Xaa Met Thr Thr Ala Phe Glu Tyr Thr Leu Lys Xaa Gly Gly Leu Met
210 215 220

Lys Lys Glu Asp Tyr Pro Tyr Asn Gly Arg
225 230

<210> 23

<211> 1369

<212> DNA

<213> Glycine max

<400> 23

CggCacgagt gcacctttct ctctctccga tggctaattct ctCactcttg ttcttcggtc 60
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tgatccgtta agtgggtcgc gacgcggagg accaccacct gctcaacgcg gaccaccttc 180
ctcccgcttt caagacaaag ttgcgcaaga cctacgcacc gcaggaggag caccgaccac 240
gcttcgctat ctccaagaac aacttgctcc gcgccaagtc gcaccagaaa ttggaccttc 300
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tgagctcgat ggtctcaact gtactgtgcta tacatgtttc taaccattaa atataagagt 1140
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ataatgttat ggaggaggaa actgctaagc ccatgtttat gcttttatgc tgtaattctc 1260
tatgctagat agtctagcta caaattattc ccacggttat cgatagttat tgcaagtaac 1320
ctgaataaaa ttaatttggt ttcccacaat taacaaaaaa aaaaaaaa 1369

<210> 24

<211> 366

<212> PRT

<213> Glycine max

<400> 24

Met Ala Asn Leu Ser Leu Leu Phe Phe Gly Leu Leu Leu Phe Ser Ala
1 5 10 15

Ala Val Ala Thr Val Glu Arg Ile Asp Asp Glu Asp Asn Leu Leu Ile
20 25 30

Arg Gln Val Val Pro Asp Ala Glu Asp His His Leu Leu Asn Ala Glu
 35 40 45
 His His Phe Ser Ala Phe Lys Thr Lys Phe Ala Lys Thr Tyr Ala Thr
 50 55 60
 Gln Glu Glu His Asp His Arg Phe Arg Ile Phe Lys Asn Asn Leu Leu
 65 70 75 80
 Arg Ala Lys Ser His Gln Lys Leu Asp Pro Ser Ala Val His Gly Val
 85 90 95
 Thr Arg Phe Ser Asp Leu Thr Pro Ser Glu Phe Arg Gly Gln Phe Leu
 100 105 110
 Gly Leu Lys Pro Leu Arg Leu Pro Ser Asp Ala Gln Lys Ala Pro Ile
 115 120 125
 Leu Pro Thr Ser Asp Leu Pro Thr Asp Phe Asp Trp Arg Asp His Gly
 130 135 140
 Ala Val Thr Gly Val Lys Asn Gln Gly Ser Cys Gly Trp Cys Trp Ser
 145 150 155 160
 Phe Ser Ala Val Gly Ala Leu Glu Gly Ala His Phe Leu Ser Thr Gly
 165 170 175
 Gly Leu Val Ser Leu Ser Glu Gln Gln Leu Val Asp Cys Asp His Glu
 180 185 190
 Cys Asp Pro Glu Glu Arg Gly Ala Cys Asp Ser Gly Cys Asn Gly Gly
 195 200 205
 Leu Met Thr Thr Ala Phe Glu Tyr Thr Leu Lys Ala Gly Gly Leu Met
 210 215 220
 Arg Glu Glu Asp Tyr Pro Tyr Thr Gly Arg Asp Arg Gly Pro Cys Lys
 225 230 235 240
 Phe Asp Lys Ser Lys Ile Ala Ala Ser Val Ala Asn Phe Ser Val Val
 245 250 255
 Ser Leu Asp Glu Glu Gln Ile Ala Ala Asn Leu Val Lys Asn Gly Pro
 260 265 270
 Leu Ala Val Gly Ile Asn Ala Val Phe Met Gln Thr Tyr Ile Gly Gly
 275 280 285
 Val Ser Cys Pro Tyr Ile Cys Gly Lys His Leu Asp His Gly Val Leu
 290 295 300
 Leu Val Gly Tyr Gly Ser Gly Ala Tyr Ala Pro Ile Arg Phe Lys Glu
 305 310 315 320
 Lys Pro Tyr Trp Ile Ile Lys Asn Ser Trp Gly Glu Ser Trp Gly Glu
 325 330 335
 Glu Gly Tyr Tyr Lys Ile Cys Arg Gly Arg Asn Val Cys Gly Val Asp
 340 345 350

Ser Met Val Ser Thr Val Ala Ala Ile His Val Ser Asn His
355 360 365

<210> 25
<211> 441
<212> DNA
<213> Zea mays

<220>
<221> unsure
<222> (362)

<220>
<221> unsure
<222> (375)

<220>
<221> unsure
<222> (398)

<400> 25
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ataacccttg acatgggact tcttgttgct ggcacaaagt accgtggaga attcgaagaa 180
agattaaaga agctgatgga ggaataaaag caaagtgatg agataatact ctttattgat 240
gaagttcaca ctctgatagg agcaggagca gcggagggtgc tatagatgct gctaataatc 300
tgaagcctgc gttgccagag gtgaattaca gtgcattgga gccactacac tagatgaata 360
tnggaagccc attgngaag accgccttg acggaggntt caacctgtga aagtgcgaga 420
ccaacagtag atgaaccat t 441

<210> 26
<211> 128
<212> PRT
<213> Zea mays

<220>
<221> UNSURE
<222> (121)

<220>
<221> UNSURE
<222> (125)

<400> 26
Lys Asn Asn Phe Cys Leu Ile Gly Glu Pro Gly Val Gly Lys Thr Ala
1 5 10 15

Ile Ala Glu Gly Leu Ala Gln Arg Ile Ser Thr Gly Asp Val Pro Glu
20 25 30

Thr Ile Glu Gly Lys Lys Val Ile Thr Leu Asp Met Gly Leu Leu Val
35 40 45

Ala Gly Thr Lys Tyr Arg Gly Glu Phe Glu Glu Arg Leu Lys Lys Leu
50 55 60

Met Glu Glu Ile Lys Gln Ser Asp Glu Ile Ile Leu Phe Ile Asp Glu
65 70 75 80

Val His Thr Leu Ile Gly Ala Gly Ala Ala Glu Gly Ala Ile Asp Ala
85 90 95

Ala Asn Ile Leu Glu Ala Cys Val Ala Arg Gly Glu Leu Gln Cys Ile
100 105 110

Gly Ala Thr Thr Leu Asp Glu Tyr Xaa Lys Pro Ile Xaa Lys Asp Pro
115 120 125

<210> 27

<211> 2471

<212> DNA

<213> Oryza sativa

<400> 27

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tttcgttgc gtcgaaatc cattcacacc acgtgcaaaa cgtgttttgg agctttcatt 60
ggaagaagct cgtcagctag gacacaaacta tattggatct gagcacttgc ttcttggagc 120
gctccgtgag ggtgaagggt tagcagcccg tgtgctgcgaa agccttggag cgcgtctag 180
caatatccgc acgcagggtta tccgaatgat tggcgagact acagaagctg ttggtgcagg 240
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<210> 28

<211> 760

<212> PRT

<213> Oryza sativa

<400> 28

Phe Val Ala Val Glu Ile Pro Phe Thr Pro Arg Ala Lys Arg Val Leu
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20 25 30

Ser Glu His Leu Leu Leu Gly Leu Leu Arg Glu Gly Glu Val Ala
35 40 45

Ala Arg Val Leu Glu Ser Leu Gly Ala Asp Pro Ser Asn Ile Arg Thr
50 55 60

Gln Val Ile Arg Met Ile Gly Glu Thr Thr Glu Ala Val Gly Ala Gly
65 70 75 80

Val Gly Gly Gly Ser Ser Gly Asn Lys Met Pro Thr Leu Glu Glu Tyr
85 90 95

Gly Thr Asn Leu Thr Lys Leu Ala Glu Glu Gly Lys Leu Asp Pro Val
100 105 110

Val Gly Arg Gln Pro Gln Ile Glu Arg Val Val Gln Ile Leu Gly Arg
115 120 125

Arg Thr Lys Asn Asn Pro Cys Leu Ile Gly Glu Pro Gly Val Gly Lys
130 135 140

Thr Ala Ile Ala Glu Gly Leu Ala Gln Arg Ile Ser Thr Gly Asp Val
145 150 155 160

Pro Glu Thr Ile Glu Gly Lys Lys Val Ile Thr Leu Asp Met Gly Leu
165 170 175

Leu Val Ala Gly Thr Lys Tyr Arg Gly Glu Phe Glu Glu Arg Leu Lys
180 185 190

Lys Leu Met Glu Glu Ile Lys Gln Ser Asp Glu Ile Ile Leu Phe Ile
195 200 205

Asp Glu Val His Thr Leu Ile Gly Ala Gly Ala Ala Glu Gly Ala Ile
210 215 220

Asp Ala Ala Asn Ile Leu Lys Pro Ala Leu Ala Arg Gly Glu Leu Gln
225 230 235 240

Cys Ile Gly Ala Thr Thr Leu Asp Glu Tyr Arg Lys His Ile Glu Lys
245 250 255

Asp Pro Ala Leu Glu Arg Arg Phe Gln Pro Val Arg Val Pro Glu Pro
260 265 270

Thr Val Asp Glu Thr Ile Glu Ile Leu Arg Gly Leu Arg Glu Arg Tyr
275 280 285

Glu Ile His His Lys Leu Arg Tyr Thr Asp Asp Ala Leu Ile Ser Ala
290 295 300

Ala Lys Leu Ser Tyr Gln Tyr Ile Ser Asp Arg Phe Leu Pro Asp Lys
305 310 315 320

Ala Ile Asp Leu Ile Asp Glu Ala Gly Ser Arg Val Arg Leu Arg His
325 330 335

Ala Gln Val Pro Glu Glu Ala Arg Glu Leu Asp Lys Glu Leu Lys Gln
340 345 350

Ile Thr Lys Asp Lys Asn Glu Ala Val Arg Ser Gln Asp Phe Glu Lys
355 360 365

Ala Gly Glu Leu Arg Asp Arg Glu Met Glu Leu Lys Ala Gln Ile Thr
370 375 380

Ala Leu Ile Asp Lys Ser Lys Glu Met Ser Lys Ala Glu Thr Glu Ser
385 390 395 400

Gly Glu Thr Gly Pro Leu Val Asn Glu Ala Asp Ile Gln His Ile Val
405 410 415

Ser Ser Trp Thr Gly Ile Pro Val Glu Lys Val Ser Ser Asp Glu Ser
420 425 430

Asp Lys Leu Leu Lys Met Glu Glu Thr Leu His Gln Arg Val Ile Gly
435 440 445

Gln Asp Glu Ala Val Lys Ala Ile Ser Arg Ser Ile Arg Arg Ala Arg
450 455 460

Val Gly Leu Lys Asn Pro Asn Arg Pro Ile Ala Ser Phe Ile Phe Ala
465 470 475 480

Gly Pro Thr Gly Val Gly Lys Ser Glu Leu Ala Lys Ala Leu Ala Ala
485 490 495

Tyr Tyr Phe Gly Ser Glu Glu Ala Met Ile Arg Leu Asp Met Ser Glu
500 505 510

Phe Met Glu Arg His Thr Val Ser Lys Leu Ile Gly Ser Pro Pro Gly
515 520 525

Tyr Val Gly Tyr Thr Glu Gly Gly Gln Leu Thr Glu Ala Val Arg Arg
530 535 540

Arg Pro Tyr Thr Val Val Leu Phe Asp Glu Ile Glu Lys Ala His Pro
545 550 555 560

Asp Val Phe Asn Met Met Leu Gln Ile Leu Glu Asp Gly Arg Leu Thr
565 570 575

Asp Ser Lys Gly Arg Thr Val Asp Phe Lys Asn Thr Leu Leu Ile Met
580 585 590

Thr Ser Asn Val Gly Ser Ser Val Ile Glu Lys Gly Gly Arg Lys Ile
595 600 605

Gly Phe Asp Leu Asp Tyr Asp Glu Lys Asp Ser Ser Tyr Ser Arg Ile
610 615 620

Lys Ser Leu Val Val Glu Glu Met Lys Gln Tyr Phe Arg Pro Glu Phe
625 630 635 640

Leu Asn Arg Leu Asp Glu Met Ile Val Phe Arg Gln Leu Thr Lys Leu
645 650 655

Glu Val Lys Glu Ile Ala Glu Ile Met Leu Lys Glu Val Phe Asp Arg
660 665 670

Leu Lys Ala Lys Asp Ile Asp Leu Gln Val Thr Glu Lys Phe Lys Glu
675 680 685

Arg Ile Val Asp Glu Gly Phe Asn Pro Ser Tyr Gly Ala Arg Pro Leu
690 695 700

Arg Arg Ala Ile Met Arg Leu Leu Glu Asp Ser Leu Ala Glu Lys Met
705 710 715 720

Leu Ala Gly Glu Val Lys Glu Gly Asp Ser Ala Ile Val Asp Val Asp
725 730 735

Ser Glu Gly Lys Val Ile Val Leu Asn Gly Gln Ser Gly Leu Pro Glu
740 745 750

Leu Ser Thr Pro Ala Val Thr Val
755 760

<210> 29
<211> 540
<212> DNA
<213> *Triticum aestivum*

<220>
<221> unsure
<222> (434)

<220>
<221> unsure
<222> (462)

<220>
<221> unsure
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<220>
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<222> (515)

<400> 29
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catgttgaaac acatccggat gtgoccttctc aatctcatca aaaagcacaa cgctgtagg 180
ccgcgctoga accgcctccg tcagctgccc accttcagtg tatccacat agcctggtgg 240
tgaaccgatc aacttgagca cagtgtgctt ctccatgaac tcaactcatat ccagccggat 300
catggcttct tcagagccga agtaatatga tgccagagtc ttgcaagct ctgatttccc 360
aacaccagtg ggacctgcaa aaatgaagct cgcaattggt ctgttggggc tcttgagggc 420
cacacgagca cggngaacag accgacttat tgctttcaca gnetcgtctt gggcgatgac 480
acgcttatgc aatgnetcct tcaacctaaa gaagnttatc aaattcgag tcgagacattt 540

<210> 30
 <211> 178
 <212> PRT
 <213> Triticum aestivum

<220>
 <221> UNSURE
 <222> (9)

<220>
 <221> UNSURE
 <222> (16)

<220>
 <221> UNSURE
 <222> (27)

<220>
 <221> UNSURE
 <222> (36)

<400> 30
 Lys Val Ser Thr Ala Asn Leu Ile Xaa Phe Phe Arg Leu Lys Glu Xaa
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 Leu His Lys Arg Val Ile Ala Gln Asp Glu Xaa Val Lys Ala Ile Ser
 20 25 30
 Arg Ser Val Xaa Arg Ala Arg Val Ala Leu Lys Ser Pro Asn Arg Pro
 35 40 45
 Ile Ala Ser Phe Ile Phe Ala Gly Pro Thr Gly Val Gly Lys Ser Glu
 50 55 60
 Leu Ala Lys Thr Leu Ala Ser Tyr Tyr Phe Gly Ser Glu Glu Ala Met
 65 70 75 80
 Ile Arg Leu Asp Met Ser Glu Phe Met Glu Arg His Thr Val Ser Lys
 85 90 95
 Leu Ile Gly Ser Pro Pro Gly Tyr Val Gly Tyr Thr Glu Gly Gly Gln
 100 105 110
 Leu Thr Glu Ala Val Arg Arg Arg Pro Tyr Ser Val Val Leu Phe Asp
 115 120
 Glu Ile Glu Lys Ala His Pro Asp Val Phe Asn Met Met Leu Gln Ile
 130 135 140
 Leu Glu Asp Gly Arg Leu Thr Asp Ser Lys Gly Arg Thr Val Asp Phe
 145 150 155 160
 Lys Asn Thr Leu Leu Ile Met Thr Ser Asn Val Gly Ser Ser Val Ile
 165 170 175
 Glu Lys

<210> 31
 <211> 2050

<212> DNA
<213> Zea mays

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<400> 31
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gaaaaaggctg ataacccttg acatgggact tctctgttgc ggcacaaagt accgtggaga 180
attcgaagaa agattaaaga agctgatgga ggaataaag caaagtgatg agataaact 240
ctttattgat gaagtccaca ctctgatagg agcaggagca gcggaggtgc tatagatgct 300
gctaatact tgaagcctgc gttggccaga ggtgaattac agtgcattgg agccactaca 360
ctagatgaat taggaagca cattgagaaa gaccaggcac tgaacaggag gtttcaacct 420
gtgaaagtgc cagaaccaac agtagatgaa accattgaaa tctcagagg actgagggaa 480
cgatagtaga tccaccataa acttcgttac actgatgaag ctctgattgc agctgcaaa 540
ctgtcatatc aatatacag tgatcgtgtt ctccagata aggcaattga ctgtattgat 600
gaagcagggt cccgtgttag gctacagcat gcacaggctc ccgagggaagc aagagagctt 660
gacaaggagc tcaacaaggt cacgaaacag aagaatgaag ctgttcgaag ccaggatttt 720
gagaaggctg gggaaattgag agaccgtgaa atgaaattga aggccagatc aacagccctc 780
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gtttccaggc atgaatctga taagcttctt aagatggaa agactttgca caagcgtgtc 960
attggccaag atgagcgtgt ggtagcaatt agtcgtccca tccgccgtgc tctgtgtggg 1020
ctcaagaacc ccaacaggcc aattgcaagc ttatttttgc ctggtccccc cggcgtgtgg 1080
aagcttgagc ttgcaaggcc tcttgagccc tattactttg gctctgagga ggctatgatc 1140
cggtctgata tgagtgaaat catggagaga cacacgggat ccaagctgat tggttcaact 1200
ccaggatatg taggatacac tgagggtggc cagctgacag aggcagttcg agccggccca 1260
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ctggtcatcg aggagatgaa gcagtatctc cgactgtagt tctcaaccg ctctgatgag 1560
atgatcgtgt tcaggcagct taccagagtc gaggtcaagg agatagcgga catcatgctc 1620
caggaggtct ttgacagcct gaaggccaag gacatcaatc tcaagtgac cgagaagttc 1680
aaggagcggt tgggtggaca aggtctaac cctagctatg gtgcacgccc gctgaggcga 1740
gccatcatga ggtcgtgcca ggacagcctt gctgagaaga tgctcgaggg ggagtgaaag 1800
gaggcgagct ctgccatagt agatgtggac tcggagggga aggtgtgtgt gctcaatggt 1860
caggcgagca taccggagct ctcaactccg cgcgatcccg tttagctcgt acataacaaa 1920
tgacaaaaat aatagcatag tttttgttca aacacattat catttatggt tagaataatc 1980
gtgtatatgt agtgggtatg tcaatgggga aatcgttctt gctctaaaaa aaaaaaaa 2040
aaaaaaaaag
2050

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<210> 32
<211> 550
<212> PRT
<213> Zea mays

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<400> 32
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Ala Asn Ile Leu Lys Pro Ala Leu Ala Arg Gly Glu Leu Gln Cys Ile
20 25 30
Gly Ala Thr Thr Leu Asp Glu Tyr Arg Lys His Ile Glu Lys Asp Pro
35 40 45
Ala Leu Glu Arg Arg Phe Gln Pro Val Lys Val Pro Glu Pro Thr Val
50 55 60
Asp Glu Thr Ile Glu Ile Leu Arg Gly Leu Arg Glu Arg Tyr Glu Ile
65 70 75 80

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His His Lys Leu Arg Tyr Thr Asp Glu Ala Leu Ile Ala Ala Ala Lys
 85 90 95
 Leu Ser Tyr Gln Tyr Ile Ser Asp Arg Phe Leu Pro Asp Lys Ala Ile
 100 105 110
 Asp Leu Ile Asp Glu Ala Gly Ser Arg Val Arg Leu Gln His Ala Gln
 115 120 125
 Val Pro Glu Glu Ala Arg Glu Leu Asp Lys Glu Leu Lys Gln Val Thr
 130 135 140
 Lys Gln Lys Asn Glu Ala Val Arg Ser Gln Asp Phe Glu Lys Ala Gly
 145 150 155 160
 Glu Leu Arg Asp Arg Glu Met Glu Leu Lys Ala Gln Ile Thr Ala Leu
 165 170 175
 Ile Asp Lys Ser Lys Glu Leu Ser Lys Ala Glu Glu Glu Ser Gly Glu
 180 185 190
 Thr Gly Pro Met Val Asn Glu Glu Asp Ile Gln His Ile Val Ser Ser
 195 200 205
 Trp Thr Gly Ile Pro Val Glu Lys Val Ser Ser Asp Glu Ser Asp Lys
 210 215 220
 Leu Leu Lys Met Glu Glu Thr Leu His Lys Arg Val Ile Gly Gln Asp
 225 230 235 240
 Glu Ala Val Val Ala Ile Ser Arg Ser Ile Arg Arg Ala Arg Val Gly
 245 250 255
 Leu Lys Asn Pro Asn Arg Pro Ile Ala Ser Phe Ile Phe Ala Gly Pro
 260 265 270
 Thr Gly Val Gly Lys Ser Glu Leu Ala Lys Ala Leu Ala Tyr Tyr
 275 280 285
 Phe Gly Ser Glu Glu Ala Met Ile Arg Leu Asp Met Ser Glu Phe Met
 290 295 300
 Glu Arg His Thr Val Ser Lys Leu Ile Gly Ser Pro Pro Gly Tyr Val
 305 310 315 320
 Gly Tyr Thr Glu Gly Gly Gln Leu Thr Glu Ala Val Arg Arg Arg Pro
 325 330 335
 Tyr Thr Val Val Leu Phe Asp Glu Ile Glu Lys Ala His Pro Asp Val
 340 345 350
 Phe Asn Met Met Leu Gln Ile Leu Glu Asp Gly Arg Leu Thr Asp Ser
 355 360 365
 Lys Gly Arg Thr Val Asp Phe Lys Asn Thr Leu Leu Ile Met Thr Ser
 370 375 380
 Asn Val Gly Ser Ser Val Ile Glu Lys Gly Gly Arg Lys Ile Gly Phe
 385 390 395 400

Asp Leu Asp Ser Asp Glu Lys Asp Ser Ser Tyr Ser Arg Ile Lys Ser
405 410 415

Leu Val Ile Glu Glu Met Lys Gln Tyr Phe Arg Pro Glu Phe Leu Asn
420 425 430

Arg Leu Asp Glu Met Ile Val Phe Arg Gln Leu Thr Lys Leu Glu Val
435 440 445

Lys Glu Ile Ala Asp Ile Met Leu Gln Glu Val Phe Asp Arg Leu Lys
450 455 460

Ala Lys Asp Ile Asn Leu Gln Val Thr Glu Lys Phe Lys Glu Arg Val
465 470 475 480

Val Asp Glu Gly Tyr Asn Pro Ser Tyr Gly Ala Arg Pro Leu Arg Arg
485 490 495

Ala Ile Met Arg Leu Leu Glu Asp Ser Leu Ala Glu Lys Met Leu Ala
500 505 510

Gly Glu Val Lys Glu Gly Asp Ser Ala Ile Val Asp Val Asp Ser Glu
515 520 525

Gly Lys Val Val Val Leu Asn Gly Gln Gly Gly Ile Pro Glu Leu Ser
530 535 540

Thr Pro Ala Ile Thr Val
545 550

<210> 33
<211> 740
<212> DNA
<213> *Oryza sativa*

<220>
<221> unsure
<222> (628)

<220>
<221> unsure
<222> (674)

<220>
<221> unsure
<222> (740)

<400> 33
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gctccgtgag ggtgaagggt tagcagcccg tgtgctcgaa agccttggag ccgatccctag 180
caatattcgc acgcaggtta tccgaatgat tggcgagact acagaagctg ttggtgcagg 240
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aacaaaatta gcagagggagg gaaagctaga tctgtttgtt ggaaggcaac ccagattga 360
gcgtgtcgta caaattctgg ggcagacgaa caaagaacaa cccatgcctt aattggagaa 420
cctggtgttt ggaagaagaca gcaattgcag aaggccttgc tcaacgcatt tctactggtg 480
atgtgcctga aacaattgaa ggaagaagg tcattaccct tgatatggga cttcttgggtg 540
ctgggtacaaa ataccgtgga gaatttgaag aaagattaaa gaagctgatg gaagaaatca 600
agcagagtga tgagataata ctatttantg atgaagteca cactctcata ggagcaggag 660

caactgaggg tgcnattgac gctgctaaca ttttaagcca cattacaaga ggagaactac 720
atgttttgga gccacacacn 740

<210> 34

<211> 298

<212> PRT

<213> *Oryza sativa*

<220>

<221> UNSURE

<222> (65)..(66)..(67)..(68)

<220>

<221> UNSURE

<222> (276)

<400> 34

Phe Thr Pro Arg Ala Lys Arg Val Leu Glu Leu Ser Leu Glu Glu Ala
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Arg Gln Leu Gly His Asn Tyr Ile Gly Ser Glu His Leu Leu Leu Gly
20 25 30

Leu Leu Arg Glu Gly Glu Gly Val Ala Ala Arg Val Leu Glu Ser Leu
35 40 45

Gly Ala Asp Pro Ser Asn Ile Arg Thr Gln Val Ile Arg Met Ile Gly
50 55 60

Xaa Xaa Xaa Xaa Phe Val Ala Val Glu Ile Pro Phe Thr Pro Arg Ala
65 70 75 80

Lys Arg Val Leu Glu Leu Ser Leu Glu Glu Ala Arg Gln Leu Gly His
85 90 95

Asn Tyr Ile Gly Ser Glu His Leu Leu Leu Gly Leu Leu Arg Glu Gly
100 105 110

Glu Gly Val Ala Ala Arg Val Leu Glu Ser Leu Gly Ala Asp Pro Ser
115 120 125

Asn Ile Arg Thr Gln Val Ile Arg Met Ile Gly Glu Thr Thr Glu Ala
130 135 140

Val Gly Ala Gly Val Gly Gly Gly Ser Ser Gly Asn Lys Met Pro Thr
145 150 155 160

Leu Glu Glu Tyr Gly Thr Asn Leu Thr Lys Leu Ala Glu Glu Gly Lys
165 170 175

Leu Asp Pro Val Val Gly Arg Gln Pro Arg Leu Ser Val Ser Tyr Lys
180 185 190

Phe Trp Gly Arg Arg Thr Lys Asn Asn Pro Cys Leu Ile Gly Glu Pro
195 200 205

Gly Val Trp Lys Thr Ala Ile Ala Glu Gly Leu Ala Gln Arg Ile Ser
210 215 220

Thr Gly Asp Val Pro Glu Thr Ile Glu Gly Lys Lys Val Ile Thr Leu
225 230 235 240

Asp Met Gly Leu Leu Val Ala Gly Thr Lys Tyr Arg Gly Glu Phe Glu
245 250 255

Glu Arg Leu Lys Lys Leu Met Glu Glu Ile Lys Gln Ser Asp Glu Ile
260 265 270

Ile Leu Phe Xaa Asp Glu Val His Thr Leu Ile Gly Ala Gly Ala Thr
275 280 285

Glu Gly Ala Ile Asp Ala Ala Asn Ile Leu
290 295

<210> 35
<211> 1205
<212> DNA
<213> Triticum aestivum

<400> 35
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agcaacccaa ctgttttaaaa acttcatgtg ggaatgttaac ccaccatatt taacttgttt 120
agagtgttca ttgatataat tggaaagtga catgtaattt catagtatga tctaggcggt 180
ctgtcgggtg cggtcgggtc cagttgatga taaaaaatgt ttgtcact tctgacatta 240
aatagttatc actgcaagta aattattact agtgccttg aacctgcctt tctctagca 300
taaaaaccgc actagtgtat gttatttcta ttcatgtggg ttgatgatct caactttctg 360
gatgcccaacc accatatata tgcactttct ttgatataga tgctaactaa tagttgctat 420
taatatattc cctttatcga aaaaaaacta atgggtgtcg tgccgtgtgc aatgttatgc 480
cattaggtcg gagagttcg agatcgtgaa atggaattga aggcgcaga taacagcctt 540
gattgacaag agcaaggaga tgaacaaagc agagactgag tggggagaga cggggcgatg 600
gggtcatgaa tcagatatcc agcacattgt gtcatcatgg actggtattc cagtggagaa 660
agtctcgact gacgaatctg ataaacttct taagatggaa gagacattgc atagcgtgtg 720
catcgggcaa gacgaggctg tgaagcaat aagtcgggtc gtcccgctg ctcgtgtggg 780
cctcaagagc cccaacagac caattgcgag ctctattttt gcaggctcca ctcgtgtggg 840
gaaatcagag cttgcaaaga ctctggcatc atattacttc ggctctgaag aagccatgat 900
ccggctggat atgagtgtat tcatggagag gcacactgtg tccaagtgtg tcggttcacc 960
accaggctat gtgggataca ctgaagggtg gcagctgacg gaggcggttc gacggcgccc 1020
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gctccagatc ctggaagagc gaaggttaac cgacagcaag gggagaacag tggacttcaa 1140
gaacacgctc ctgataatga catcaaatgt tgggagcagc gtgattgaga agaagaagct 1200
cgtgc 1205

<210> 36
<211> 239
<212> PRT
<213> Triticum aestivum

<400> 36
Ala Gly Glu Leu Arg Asp Arg Glu Met Glu Leu Arg Arg Gln Ile Thr
1 5 10 15

Ala Leu Ile Asp Lys Ser Lys Glu Met Asn Lys Ala Glu Thr Glu Ser
20 25 30

Gly Glu Thr Gly Pro Met Val His Glu Ser Asp Ile Gln His Ile Val
35 40 45

Ser Ser Trp Thr Gly Ile Pro Val Glu Lys Val Ser Thr Asp Glu Ser
50 55 60

Asp Lys Leu Leu Lys Met Glu Glu Thr Leu His Lys Arg Val Ile Gly
 65 70 75 80
 Gln Asp Glu Ala Val Lys Ala Ile Ser Arg Ser Val Arg Arg Ala Arg
 85 90 95
 Val Gly Leu Lys Ser Pro Asn Arg Pro Ile Ala Ser Phe Ile Phe Ala
 100 105 110
 Gly Pro Thr Gly Val Gly Lys Ser Glu Leu Ala Lys Thr Leu Ala Ser
 115 120 125
 Tyr Tyr Phe Gly Ser Glu Glu Ala Met Ile Arg Leu Asp Met Ser Glu
 130 135 140
 Phe Met Glu Arg His Thr Val Ser Lys Leu Ile Gly Ser Pro Pro Gly
 145 150 155 160
 Tyr Val Gly Tyr Thr Glu Gly Gly Gln Leu Thr Glu Ala Val Arg Arg
 165 170 175
 Arg Pro Tyr Ser Val Val Leu Phe Asp Glu Ile Glu Lys Ala His Pro
 180 185 190
 Asp Val Phe Asn Met Met Leu Gln Ile Leu Glu Asp Gly Arg Leu Thr
 195 200 205
 Asp Ser Lys Gly Arg Thr Val Asp Phe Lys Asn Thr Leu Leu Ile Met
 210 215 220
 Thr Ser Asn Val Gly Ser Ser Val Ile Glu Lys Lys Lys Leu Val
 225 230 235

<210> 37
 <211> 498
 <212> DNA
 <213> Zea mays

<220>
 <221> unsure
 <222> (327)

<220>
 <221> unsure
 <222> (350)

<220>
 <221> unsure
 <222> (359)

<220>
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 <222> (423)

<220>
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 <222> (448)

<220>
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 <222> (459)

<220>
 <221> unsure
 <222> (486)

<220>
 <221> unsure
 <222> (492)

<400> 37
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 acgtgtccac tattggaatg ggcatagtct gatcaacagc ttctataatc cttgggtggtg 180
 gcacgaaggc caagcgattt gccatgcccc acaccaggat tatgatccat cagcctgtcg 240
 gaggtgcaag cgggcaggcc ctagatgtag aggtccaagc gaaggagata ttgaccaaca 300
 agaggaatgt tcatcggtac gtatcangct tcacaggccg cactcctgan ccagtagana 360
 aagactcgac anagatcgta caggggcctc tcgaggngtc gataggatca tcatgctgat 420
 cgntgagaat atatccattg agctgtcnga gaggtgaanc taatacatag aagacgtaca 480
 gtcacnagtt cntacaca 498

<210> 38
 <211> 113
 <212> PRT
 <213> Zea mays

<220>
 <221> UNSURE
 <222> (109)

<400> 38
 Leu Leu Leu Leu Asp Ala Ile Asp Pro Asp Ser Asp Ile Arg Leu Phe
 1 5 10 15
 Val Asn Ser Pro Gly Gly Ser Leu Ser Ala Thr Met Ala Ile Tyr Asp
 20 25 30
 Val Met Gln Leu Val Arg Ala Asp Val Ser Thr Ile Gly Met Gly Ile
 35 40 45
 Ala Gly Ser Thr Ala Ser Ile Ile Leu Gly Gly Gly Thr Lys Gly Lys
 50 55 60
 Arg Phe Ala Met Pro Asn Thr Arg Ile Met Ile His Gln Pro Val Gly
 65 70 75 80
 Gly Ala Ser Gly Gln Ala Leu Asp Val Glu Val Gln Ala Lys Glu Ile
 85 90 95

Leu Thr Asn Lys Arg Asn Val His Arg Ile Val Ser Xaa Phe Thr Gly
100 105 110

Arg

<210> 39
<211> 459
<212> DNA
<213> *Oryza sativa*

<400> 39
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gcgcgcggcg cgccggggga gcgcgcggcg ctgcccaacg cgcgggtcat gattcaccag 120
ccatccgggg gcgcgcaggg ccaggccacc gacatcgcca tccaggccaa ggagattctc 180
aagctgcgcg accgcctcaa caagatctac cagaagcaca cggccagga gatcgacaag 240
atcgagcagt gcattggagc cgacctcttc atggaccccg agggagcgcg cgattggggg 300
ctcatcgacg aggttaattga gaaccgcccc gcgtccctga taccgaggg gcgcactggc 360
gttgacctgc cgcaccacag cgccgctggc gtccggcgaa ggggcagaga tgtcgaggag 420
ccctccggcg tgtgagctgt ggccgcaaag gtgaaacct 459

<210> 40
<211> 109
<212> PRT
<213> *Oryza sativa*

<400> 40
Arg Cys Pro Val Thr Thr Leu Cys Ile Gly Gln Ala Ala Ser Met Gly
1 5 10 15

Ser Leu Leu Leu Ala Ala Gly Ala Arg Gly Glu Arg Arg Ala Leu Pro
20 25 30

Asn Ala Arg Val Met Ile His Gln Pro Ser Gly Gly Ala Gln Gly Gln
35 40 45

Ala Thr Asp Ile Ala Ile Gln Ala Lys Glu Ile Leu Lys Leu Arg Asp
50 55 60

Arg Leu Asn Lys Ile Tyr Gln Lys His Thr Gly Gln Glu Ile Asp Lys
65 70 75 80

Ile Glu Gln Cys Met Glu Arg Asp Leu Phe Met Asp Pro Glu Glu Ala
85 90 95

Arg Asp Trp Gly Leu Ile Asp Glu Val Ile Glu Asn Arg
100 105

<210> 141
<211> 466
<212> DNA
<213> *Glycine max*

<400> 41
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agcagttgat gacgatatgg caaacatcat agttgctcag ctccgtgtacc tcgacgtgt 120
tgatcctaac aaggatatgt tcatgtatgt aaattctcca ggagggtcgg ttacagctgg 180
aatggctata ttgtatataa tgaggcatat ccgacctgat gtgtctactg ttgtgttg 240
attagcagct agtatgggag cttttctgct gagcgacagg acaaaaaggaa agagatacag 300
cttgccaat tcaaggataa tgattcatca accgcttggt ggtgctcaag gagggcaaac 360

tgacatagat attcaggcta atgaaatgct gcatcaaaag gcaaatctga atggatatct 420
cgccatcac actggccaaa gtttagacaa agatcaacca agatac 466

<210> 42

<211> 150

<212> PRT

<213> Glycine max

<400> 42

Glu Arg Phe Gln Ser Val Ile Ser Gln Leu Phe Gln Tyr Arg Ile Ile
1 5 10 15

Arg Cys Gly Gly Ala Val Asp Asp Met Ala Asn Ile Ile Val Ala
20 25 30

Gln Leu Leu Tyr Leu Asp Ala Val Asp Pro Asn Lys Asp Ile Val Met
35 40 45

Tyr Val Asn Ser Pro Gly Gly Ser Val Thr Ala Gly Met Ala Ile Phe
50 55 60

Asp Thr Met Arg His Ile Arg Pro Asp Val Ser Thr Val Cys Val Gly
65 70 75 80

Leu Ala Ala Ser Met Gly Ala Phe Leu Leu Ser Ala Gly Thr Lys Gly
85 90 95

Lys Arg Tyr Ser Leu Pro Asn Ser Arg Ile Met Ile His Gln Pro Leu
100 105 110

Gly Gly Ala Gln Gly Gly Gln Thr Asp Ile Asp Ile Gln Ala Asn Glu
115 120 125

Met Leu His Gln Lys Ala Asn Leu Asn Gly Tyr Leu Ala Tyr His Thr
130 135 140

Gly Gln Ser Leu Asp Lys
145 150

<210> 43

<211> 617

<212> DNA

<213> Triticum aestivum

<220>

<221> unsure

<222> (358)

<220>

<221> unsure

<222> (402)

<220>

<221> unsure

<222> (410)

<220>

<221> unsure

<222> (439)

<220>
<221> unsure
<222> (447)

<220>
<221> unsure
<222> (495)

<220>
<221> unsure
<222> (571)

<220>
<221> unsure
<222> (574)

<220>
<221> unsure
<222> (600)

<220>
<221> unsure
<222> (602)

<400> 43
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gctgggagtgg ccatatttga tacaatgaag catatcaggc ctgatgtttc gacagtttgt 180
atcgggacttg ctgcaagtat ggggtgctttt ctacttagcg gtgggacgaa agggaaagagg 240
tacagcttac ctaactcaag aataatgata catcagcctc ttgggaggag cccaaggaca 300
agagaccgac cttgagattc caaggccaaa tgagatgctg caccacaagg ccaacttnta 360
acggataacct agcataccac actgggcagc cctgggataa gnaaatgtan atactgaccg 420
tgacttcctc aagagcgona aaggagnaaa ggagtatggg ccttattgat ggagtaatcg 480
tgaaccctct taaancgctg caaccactcc agctccagtt agccatccgt gcacaaaatc 540
tatgccgctc aagcaatttt gtgtgatctc nganttggtg tgtacacctg ttttctgtag 600
cngctaagt ctttgat 617

<210> 44
<211> 95
<212> PRT
<213> Triticum aestivum

<400> 44
Gly Gly Pro Val Glu Asp Asp Met Ala Asn Val Ile Val Ala Gln Leu
1 5 10 15
Leu Tyr Leu Asp Ala Val Asp Pro Asn Lys Asp Ile Ile Met Tyr Val
20 25 30
Asn Ser Pro Gly Gly Ser Val Thr Ala Gly Met Ala Ile Phe Asp Thr
35 40 45
Met Lys His Ile Arg Pro Asp Val Ser Thr Val Cys Ile Gly Leu Ala
50 55 60
Ala Ser Met Gly Ala Phe Leu Leu Ser Gly Gly Thr Lys Gly Lys Arg
65 70 75 80
Tyr Ser Leu Pro Asn Ser Arg Ile Met Ile His Gln Pro Leu Gly
85 90 95

<210> 45
 <211> 521
 <212> DNA
 <213> Triticum aestivum

<220>
 <221> unsure
 <222> (384)

<220>
 <221> unsure
 <222> (469)

<400> 45
 ctctacatca actccccgg gggcgctgctc accgccgggc tcgccatcta cgacaccatg 60
 cagtacatcc gctgccccgt caacaccatc tgcctcgccc aggccgcctc catgggctcc 120
 ctctctctcg ccgcggggcg gcgcggggag aggcggggcg tcgcccaacgc cagggtcatg 180
 atccaccagc cctccggggg ggcccagggc caggccaccg acatcgccat ccaggccaag 240
 gagatactca aagctgcgcg accgcctcaa caagatctac gcccaagcaca cggggccaaga 300
 acatcgacaa gatcgagcag tgcattggagc gtgacctttt catggaccgc cgaggaggcc 360
 gcgaatgggg ggtttataga cgaatgcctc gagaacgccc ggctccctca tcttgatggc 420
 tcatgccgtt gaccgcctca cacggtgggg gccccgcgcc aacggcgctng caaggaaaag 480
 atatggagga cctccgcgta taagggtggc aagcacaaa g 521

<210> 46
 <211> 84
 <212> PRT
 <213> Triticum aestivum

<400> 46
 Leu Tyr Ile Asn Ser Pro Gly Gly Val Val Thr Ala Gly Leu Ala Ile
 1 5 10 15
 Tyr Asp Thr Met Gln Tyr Ile Arg Cys Pro Val Asn Thr Ile Cys Ile
 20 25 30
 Gly Gln Ala Ala Ser Met Gly Ser Leu Leu Leu Ala Ala Gly Ala Arg
 35 40 45
 Gly Glu Arg Arg Ala Leu Pro Asn Ala Arg Val Met Ile His Gln Pro
 50 55 60
 Ser Gly Gly Ala Gln Gly Gln Ala Thr Asp Ile Ala Ile Gln Ala Lys
 65 70 75 80
 Glu Ile Leu Lys

<210> 47
 <211> 900
 <212> DNA
 <213> Zea mays

<400> 47
 ccaagcgctc gagctcctcc tccttgacgc catcgaccgc gactctgaca tcgcctctt 60
 cgtcaactca ccagggggat cccttagcgc aacaatggcc atctatgatg taatgcagct 120
 tgtgagggca gacgtgtcca ctattggaat gggcatagct ggatcaacag cttctataat 180
 ccttgggtgt ggcacgaagg gcaagcgatt tgcctagccc aacaccagga ttatgatcca 240
 tcagcctgtc ggaggtgcaa gcgggcaggc cctagatgta gaggtccaag cgaaggagat 300

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attgaccaac aagaggaatg tcattcggat cgtatcaggc ttcacaggcc gcaactcctga 360
gcaggttagag aaagacattg acagagatcg ttacatgggc cctctcgagg ctgtcgatta 420
tggactcatt gatggcgtga tcgatggaga cagtattatc ccacttgagg ctgtcccgga 480
gagggtgaag cctaagtaca actacgaaga gctgtacaag gatccacaga agtttcttac 540
accagatgtc ccagatgatg agatatacta gtogaaaagt tgtattttgt gcgaatgtta 600
agtcgtcttc tcagcaagca gatgtttttc gtogcgttga gctgtcaaac caacatagc 660
actagtagct tattgatctt gtttactgac tggatggtga ttcgagcagg caactagaac 720
ctgttggttg tgtttctggt gttacattgt ggtgttagaa tggtcocggt gtttcgtttt 780
gaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 840
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 900

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<210> 48
<211> 189
<212> PRT
<213> Zea mays

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<400> 48
His Ala Ser Glu Leu Leu Leu Asp Ala Ile Asp Pro Asp Ser Asp
1 5 10 15

Ile Arg Leu Phe Val Asn Ser Pro Gly Gly Ser Leu Ser Ala Thr Met
20 25 30

Ala Ile Tyr Asp Val Met Gln Leu Val Arg Ala Asp Val Ser Thr Ile
35 40 45

Gly Met Gly Ile Ala Gly Ser Thr Ala Ser Ile Ile Leu Gly Gly Gly
50 55 60

Thr Lys Gly Lys Arg Phe Ala Met Pro Asn Thr Arg Ile Met Ile His
65 70 75 80

Gln Pro Val Gly Gly Ala Ser Gly Gln Ala Leu Asp Val Glu Val Gln
85 90 95

Ala Lys Glu Ile Leu Thr Asn Lys Arg Asn Val Ile Arg Ile Val Ser
100 105 110

Gly Phe Thr Gly Arg Thr Pro Glu Gln Val Glu Lys Asp Ile Asp Arg
115 120 125

Asp Arg Tyr Met Gly Pro Leu Glu Ala Val Asp Tyr Gly Leu Ile Asp
130 135 140

Gly Val Ile Asp Gly Asp Ser Ile Ile Pro Leu Glu Pro Val Pro Glu
145 150 155 160

Arg Val Lys Pro Lys Tyr Asn Tyr Glu Glu Leu Tyr Lys Asp Pro Gln
165 170 175

Lys Phe Leu Thr Pro Asp Val Pro Asp Asp Glu Ile Tyr
180 185

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<210> 49
<211> 690
<212> DNA
<213> Oryza sativa

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<400> 49
cgctgccccc tcaccacgct ctgcatcggc caggccgcgt ccatggggctc cctctcgctc 60
gccgccggcg cgcgcgggga gcgcggggcg ctgcccacgc cgcgggtcat gattcaccag 120
ccatccgggg gcgcgcaggg ccaggccacc gacatcgcca tccaggccaa ggagattctc 180
aagctgcgcg accgcctcaa caagatctac cagaagcaca ccggccagga gatcgacaag 240
atcgagcagt gcattggagcg cgacctcttc atggacccecg agggaggcgcg cgattggggg 300
ctcatcgagc aggttaattga gaaccgcccc gcgtccctga tacccgaggg cgccactggc 360
ggtgacctgc cgcaccacag cgcgcgtggc gtccggcgaa ggggcagaga tgtcgaggag 420
ccctccggcg tgtgagctgt ggccgcaaag gtgaaacctt ttcgtgtccc atggccatgt 480
tggtgttgtt attagatcca aggttcagtt cttatactac ataaacttaa cttgttatta 540
ttcaggttgc cacttgttat tcaggttgcc gatgtgttcg gctccttaca tgtgtgtctg 600
attgcctgaa ttgagctagt gctgatattt attgcaaatc taaggaaatt ttattccttc 660
catactgata aaaaaaaaaa aaaaaaaaaa

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<210> 50
<211> 144
<212> PRT
<213> Oryza sativa

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<400> 50
Arg Cys Pro Val Thr Thr Leu Cys Ile Gly Gln Ala Ala Ser Met Gly
1 5 10 15

Ser Leu Leu Leu Ala Ala Gly Ala Arg Gly Glu Arg Arg Ala Leu Pro
20 25 30

Asn Ala Arg Val Met Ile His Gln Pro Ser Gly Gly Ala Gln Gly Gln
35 40 45

Ala Thr Asp Ile Ala Ile Gln Ala Lys Glu Ile Leu Lys Leu Arg Asp
50 55 60

Arg Leu Asn Lys Ile Tyr Gln Lys His Thr Gly Gln Glu Ile Asp Lys
65 70 75 80

Ile Glu Gln Cys Met Glu Arg Asp Leu Phe Met Asp Pro Glu Glu Ala
85 90 95

Arg Asp Trp Gly Leu Ile Asp Glu Val Ile Glu Asn Arg Pro Ala Ser
100 105 110

Leu Ile Pro Glu Gly Ala Thr Gly Val Asp Leu Pro His His Ser Ala
115 120 125

Ala Gly Val Gly Gly Arg Gly Arg Asp Val Glu Glu Pro Ser Ala Val
130 135 140

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<210> 51
<211> 874
<212> DNA
<213> Glycine max

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<400> 51
gcacgaggga gcgtttccag agtgtttataa gtcagctttt ccaatacagg ataaccggtt 60
gtggtgggagc agttgatgac gatattggcaa acatcatagt tgcctcagctc cttgacctcg 120
acgctgttga tcctaacaag gatattgtca tgtatgtaaa ttctccagga gggctcggtta 180
cagctggaat ggcctatatt gatacaatga ggcatatccg acctgatgtg tctactgttt 240
gtgttgagatt agcagctagt atgggagctt ttctgctgag cgcagggaca aaagggaaaga 300
gatacagctt gccaaattca aggataatga ttcatcaacc gcttggtggt gctcaaggag 360
ggcaaatctga catagatatt caggctaatt aaatgctgca tcataaggga aatctgaagt 420

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gataatctgc ctatcacact ggccaaagtt tagacaagat caaccaggat acagaccgtg 480
 attttttcat gagtgcacaaa gaagccaagg aatatggact catagatggt gtcattatga 540
 atcctctcaa agctctccag ccattagagg ctgcagcaga aggtaaagac cgggctagtg 600
 ttgaacatg agaattgtgc actttaattt ccaagggtata aaaaatcata gtgttagact 660
 gtaagatggt tttgggttgc gagtccaact taattttttt ttacggatgt tgataacctg 720
 gcccatgtac caaaaatgag gcgaaattga tactatttat ttaattattca ctgcttcaga 780
 gtttatactg acagaagggtt ctttaatgga acctgaatgt gattttaact tcaagcattc 840
 ttttgtgatg aactgaaaaa aaaaaaaaaa aaaa 874

<210> 52
 <211> 200
 <212> PRT
 <213> Glycine max

<400> 52
 Thr Arg Glu Arg Phe Gln Ser Val Ile Ser Gln Leu Phe Gln Tyr Arg
 1 5 10 15
 Ile Ile Arg Cys Gly Gly Ala Val Asp Asp Asp Met Ala Asn Ile Ile
 20 25 30
 Val Ala Gln Leu Leu Tyr Leu Asp Ala Val Asp Pro Asn Lys Asp Ile
 35 40 45
 Val Met Tyr Val Asn Ser Pro Gly Gly Ser Val Thr Ala Gly Met Ala
 50 55 60
 Ile Phe Asp Thr Met Arg His Ile Arg Pro Asp Val Ser Thr Val Cys
 65 70 75 80
 Val Gly Leu Ala Ala Ser Met Gly Ala Phe Leu Leu Ser Ala Gly Thr
 85 90 95
 Lys Gly Lys Arg Tyr Ser Leu Pro Asn Ser Arg Ile Met Ile His Gln
 100 105 110
 Pro Leu Gly Gly Ala Gln Gly Gly Gln Thr Asp Ile Asp Ile Gln Ala
 115 120 125
 Asn Glu Met Leu His His Lys Ala Asn Leu Asn Gly Tyr Leu Ala Tyr
 130 135 140
 His Thr Gly Gln Ser Leu Asp Lys Ile Asn Gln Asp Thr Asp Arg Asp
 145 150 155 160
 Phe Phe Met Ser Ala Lys Glu Ala Lys Glu Tyr Gly Leu Ile Asp Gly
 165 170 175
 Val Ile Met Asn Pro Leu Lys Ala Leu Gln Pro Leu Glu Ala Ala Ala
 180 185 190
 Glu Gly Lys Asp Arg Ala Ser Val
 195 200

<210> 53
 <211> 755
 <212> DNA
 <213> Triticum aestivum

<400> 53
 gcacgagggc ggtctgtgaggatgatat ggccaacgctc attgttgcgc agctgctata 60
 cctgggacgcc gttgatcccta acaaggatat cattatgtat gtgaactctc caggaggatc 120
 agtgacagct gggatggcca tatttgatac aatgaagcat atcaggcctg atgtttcgac 180
 agtttgtatc ggaacttgctg caagtatggg tgcttttcta cttagcgggt ggacgaaagg 240
 gaagaggtac agcttaccta actcaagaat aatgatccat cagcctcttg gaggagccca 300
 aggacaagag accgaccttg agatccaggc caatgagatg ctgcaccaca aggccaaactt 360
 gaacggatac ctatgatacc aactgggcca gccctggatg aagatcaatg tagatactga 420
 ccgtgacttc ttcattgagcg cgaaggaggc aaaggagtat ggccttattg atggagtaat 480
 cgtgaaccct cttaaagcgc tgcaaccact tccagcttcc agttagccat gccgtgcaca 540
 aaatctatgc cgtccaagc atttttgttg tgatctctg gatgtgtgtt tgtaccacgc 600
 tgttttcgtt agctcggcta gatgcttttg taatttcacg tctcgaagct ttcacaggtt 660
 gtacggaaca gatgcactac tagaatgttc atcgtttgcg gtaagatggt tgcacgtgag 720
 tcgacgtgtt tttgttataa aaaaaaaaaa aaaaaa 755

<210> 54
 <211> 174
 <212> PRT
 <213> Triticum aestivum

<400> 54
 His Glu Gly Gly Pro Val Glu Asp Asp Met Ala Asn Val Ile Val Ala
 1 5 10 15
 Gln Leu Leu Tyr Leu Asp Ala Val Asp Pro Asn Lys Asp Ile Ile Met
 20 25 30
 Tyr Val Asn Ser Pro Gly Gly Ser Val Thr Ala Gly Met Ala Ile Phe
 35 40 45
 Asp Thr Met Lys His Ile Arg Pro Asp Val Ser Thr Val Cys Ile Gly
 50 55 60
 Leu Ala Ala Ser Met Gly Ala Phe Leu Leu Ser Gly Gly Thr Lys Gly
 65 70 75 80
 Lys Arg Tyr Ser Leu Pro Asn Ser Arg Ile Met Ile His Gln Pro Leu
 85 90 95
 Gly Gly Ala Gln Gly Gln Glu Thr Asp Leu Glu Ile Gln Ala Asn Glu
 100 105 110
 Met Leu His His Lys Ala Asn Leu Asn Gly Tyr Leu Ala Tyr His Thr
 115 120 125
 Gly Gln Pro Leu Asp Lys Ile Asn Val Asp Thr Asp Arg Asp Phe Phe
 130 135 140
 Met Ser Ala Lys Glu Ala Lys Glu Tyr Gly Leu Ile Asp Gly Val Ile
 145 150 155 160
 Val Asn Pro Leu Lys Ala Leu Gln Pro Leu Pro Ala Ser Ser
 165 170

<210> 55
 <211> 788
 <212> DNA
 <213> Triticum aestivum

<400> 55
 ccacacgct ctacatcaac tccccgggg gcgtcgtcac cgcggggctc gccatctacg 60
 acacacatgca gtacatccgc tgccccgtca acaccatctg catcgggccag gccgcctcca 120
 tgggctccct cctccctgcc gccggcgccg gcggggagag gcggggcgctg cccaacgcca 180
 ggggtcatgat ccaccagccc tccggcgggg ccaggggcca ggccaccgac atcgccatcc 240
 agggccaagga gatactcaag ctgctcgacc gccccaacaa gatctacgcc aagcacacgg 300
 gccagaacat cgacaagatc gagcagtcca tggagcgtga ccttttcatg gaccccgagg 360
 agggcccgcca atggggggtt atagacgagg tcatcgagaa ccgcccgccc tccctcatgc 420
 ctgatggcct cagtgcgctt gacccgcctc accacgggtgg gggcgccggc gccaacggcc 480
 gtggcaggga cagggatatg gagggagcct ccgcgggtatg aggggtggcc agggcacaaa 540
 ggtgaaacct ttttctgagt ccgggtggcta tgttgtttgt tgttagatct aagttttgat 600
 tctaatata acagggtcaac ttggtatcct ctctctgttg ttccaattgc ctgaactgag 660
 ctattgccga tatttattgc aactcgtaaa aaggaatttc gttcccttga tactgataaa 720
 ttgatagtgt ggtgaatatc agttatacga tcaatttcaa gtcacagcaa aaaaaaaaaa 780
 aaaaaaaa

<210> 56
 <211> 172
 <212> PRT
 <213> Triticum aestivum

<400> 56
 Ile Ser Leu Tyr Ile Asn Ser Pro Gly Gly Val Val Thr Ala Gly Leu
 1 5 10 15
 Ala Ile Tyr Asp Thr Met Gln Tyr Ile Arg Cys Pro Val Asn Thr Ile
 20 25 30
 Cys Ile Gly Gln Ala Ala Ser Met Gly Ser Leu Leu Ala Ala Gly
 35 40 45
 Ala Arg Gly Glu Arg Arg Ala Leu Pro Asn Ala Arg Val Met Ile His
 50 55 60
 Gln Pro Ser Gly Gly Ala Gln Gly Gln Ala Thr Asp Ile Ala Ile Gln
 65 70 75 80
 Ala Lys Glu Ile Leu Lys Leu Arg Asp Arg Leu Asn Lys Ile Tyr Ala
 85 90 95
 Lys His Thr Gly Gln Asn Ile Asp Lys Ile Glu Gln Cys Met Glu Arg
 100 105 110
 Asp Leu Phe Met Asp Pro Glu Glu Ala Arg Glu Trp Gly Leu Ile Asp
 115 120 125
 Glu Val Ile Glu Asn Arg Pro Ala Ser Leu Met Pro Asp Gly Leu Ser
 130 135 140
 Ala Val Asp Pro Pro His His Gly Gly Gly Ala Gly Ala Asn Gly Arg
 145 150 155 160
 Gly Arg Asp Arg Asp Met Glu Glu Pro Ser Ala Val
 165 170